

AMENDMENTS TO THE CLAIMS

This listing of Claims will replace all prior versions, and listings, of Claims in the application:

Listing of Claims:

1. (currently amended) A saddle clamp for mounting on a ~~bone with curved surface vertebra and for carrying a bone-fixing member in a bone-fixing or spinal fusion operation, the vertebra having at one side thereof a pedicle, a superior facet with an edge, and a transverse process, for carrying a bone fixing member,~~ said saddle clamp having a rigid body with ~~at least two holes for passing fixing elements to be tightened to said bone and at least one assembly element integral with said body for attaching said bone fixing member,~~ said rigid body having a contact surface configured to have at least three points of contact with ~~said curved surface of the bone when said saddle clamp is mounted thereon, at least two of said holes passing through said contact surface at least adjacent to two of said three points of contact so as to provide, upon tightening of said fixing elements, at least three spaced apart, non-collinear areas of contact and thereby firm attachment of said clamp to said bone~~ for contacting the vertebra and comprising a saddle surface configured to straddle the top of the pedicle between the transverse process and the superior facet when said saddle clamp is mounted on the vertebra, and a second surface configured to contact simultaneously said superior facet.

2. (currently amended) The saddle clamp of ~~Claim 1~~ Claim 19, wherein axes of at least two of said holes converge towards said bone.
3. (currently amended) The saddle clamp of ~~Claim 1~~ Claim 20, wherein said assembly element is a threaded pin protruding from said rigid body.
4. (currently amended) The saddle clamp of ~~Claim 1~~ Claim 20, wherein said assembly element is a threaded nut built into said rigid body.
5. (canceled)
6. (currently amended) The saddle clamp of ~~Claim 5~~ Claim 1, wherein said second surface is an arcuate surface adapted to receive said edge of the superior facet.
7. (currently amended) The saddle clamp of ~~Claim 6~~ Claim 19, wherein said first and second passing holes are positioned such that, when said saddle clamp is mounted to the vertebra, an axis of the first passing hole is directed into the pedicle and an axis of the second passing hole is directed into said edge and is convergent with the axis of the first passing hole.
- 8-9. (canceled)

10. (original) A method for mounting the saddle clamp of Claim 1 to a bone, said method including:

- providing said saddle clamp with suitably configured contact surface and holes for said bone;
- providing fixing elements;
- exposing a suitable area of said bone;
- drilling holes in said bone corresponding to the passing holes, for anchoring said fixing elements; and
- mounting said saddle clamp on said bone by inserting said fixing elements through the passing holes of said clamp and tightening them in the drilled holes of said bone.

11. (original) The method of Claim 10, wherein said fixing elements are screws and said holes in the bone are pilot holes.

12-13. (canceled)

14. (original) The method of Claim 10, wherein said bone is a vertebra having a vertebra body and, at one side thereof, a pedicle, a superior facet with an edge, and a transverse process, said method including:

- providing said saddle clamp where said contact surface of the rigid body comprises a saddle surface adapted to straddle the top of the pedicle between the transverse process and the superior facet, and a second surface adapted to contact simultaneously said superior facet, a first of said passing holes being obtained through said saddle surface and a second of said passing holes being obtained through said second surface;

- providing fixing elements;

- drilling pilot holes in said vertebra corresponding to the passing holes, for anchoring said fixing elements, without penetrating further than the body of said pedicle, one pilot hole being drilled in said pedicle and a second pilot hole being drilled in said superior facet; and

- mounting said clamp on said vertebra by inserting said fixing elements through the passing holes of said clamp and tightening them in the drilled pilot holes of said vertebra, without said fixing elements penetrating said vertebra body.

15. (original) The method of Claim 14, wherein said second surface of the clamp is an arcuate surface adapted to receive said edge of the superior facet, and said second pilot hole is drilled into said edge.

16. (original) The method of Claim 14, further including adjusting the surface of said vertebra to said saddle clamp by cutting portion of said superior facet edge.

17. (original) The method of Claim 14, wherein said fixing elements are screws, or nails, or expanding anchors.
18. (original) The method of Claim 14, wherein a second of said pilot holes is drilled with an axis convergent with the axis of a first pilot hole.
19. (New) The saddle clamp of Claim 1, wherein the rigid body comprises at least two holes for passing therethrough fixing elements to be tightened to the vertebra, a first of the holes passing through the saddle surface, and a second of the holes passing through the second surface.
20. (New) The saddle clamp of Claim 1, wherein said rigid body comprises at least one assembly element integral with the body for attaching thereto the bone-fixing member.
21. (New) A saddle clamp for mounting on a vertebra and for carrying a bone-fixing member in a spinal fusion operation, the saddle clamp having a rigid body with at least one assembly element integral with the body for attaching the bone-fixing member, the rigid body having a contact surface for contacting the vertebra and comprising a saddle surface and an arcuate surface, wherein:
 - the saddle surface is defined between a first down-turned arch and an upturned arch lying in transverse planes and having a common point; and

- the arcuate surface is defined by a second down-turned arch and merging smoothly with the saddle surface,
top-most points of the arcuate surface being higher than the first down-turned arch.

22. (New) The saddle clamp of Claim 21, wherein the rigid body comprises at least two holes for passing therethrough fixing elements to be tightened to the vertebra, a first of the holes passing through the saddle surface, and a second of the holes passing through the arcuate surface.

23. (New) The saddle clamp of Claim 22, being configured to have at least three points of contact with the vertebra when the saddle clamp is mounted thereon, at least two of the holes passing through the contact surface at least adjacent to two of the three points of contact so as to provide, upon tightening of the fixing elements, at least three spaced apart, non-collinear areas of contact and thereby firm attachment of the clamp to the vertebra.

24. (New) The saddle clamp of Claim 21, further comprising at least one assembly element integral with the body for attaching thereto the bone-fixing member.